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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,806	07/03/2001	Koki Kanda	0941.65658	5709

7590 06/23/2005
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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/898,806

Applicant(s)

KANDA ET AL.

Examiner

William J. Klimowicz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19, 22 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) 28 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19, 22, 27 and 30-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continuation

The specification as amended originally on July 3, 2001, should be amended further to reflect the updated status of Patent Application Serial Number 08/834,436 (now issued as U.S. Patent No. 6,282,061).

Election/Restrictions

Claims 19, 22 and 27-32 are currently pending.

Claims 1-18, 20, 21, 23-26 have been voluntarily cancelled by the Applicants.

The Applicants have elected Species I (corresponding to FIGS. 3A and 3B) ***without*** traverse in Paper No. 15 (filed April 12, 2004).

Non-elected claims 28 and 29 were thus withdrawn from consideration as being drawn to non-elected Species.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to newly presented claim 31, the phrase "wherein said protective film further

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has a second recess which extends from said thin-film element part in a direction generally perpendicular to the longitudinal direction” is misdescriptive.

More concretely, the phrase sets forth that the second recess “extends *from* said thin-film element part in a direction generally perpendicular to the longitudinal direction” (emphasis in bold italics added) is misdescriptive with respect to the Applicants’ disclosure. More concretely, looking at FIGS. 3A and 3B of the Applicants’ drawings, the second recess (e.g., formed along the direction “h” in FIG. 3A) extends in a direction generally perpendicular to the first recess (43a), but never actually extends “from” the thin-film element part (35). As is clearly seen in FIG. 3A, there exists quite a distance between the commencement of the second recess and the thin-film element part..

Thus, it cannot be said that the second recess extends *from* said thin-film element part in a direction generally perpendicular to the longitudinal as set forth in newly presented claim 31.

Additionally, since claim 32 depends directly from claim 31, it too is thus rejected under the second paragraph of 35 U.S.C. § 112.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuzaki (JP 03-132910 A).

As per claims 19 and 30, Matsuzaki (JP 03-132910 A) discloses a magnetic head comprising: a slider (1) having a rail (11,12) with a top surface (113, 123) extending in a longitudinal direction thereof; a thin-film element part (2) to write and read information, formed on an end of said rail top surface (113, 123) (i.e., exposed at the air bearing surface) of said slider (1) along the longitudinal direction; and a protective film (3) formed on said thin-film element part (2) and defining a distal end of the rail (11, 12) along the longitudinal direction (e.g., FIG. 5) whereby air exits said slider (1) at said distal end, said protective film (3) having a first recess (curved recess within “upper-left hand corner” as seen in FIG. 7 of Matsuzaki (JP 03-132910 A)) which extends in the longitudinal direction (see FIG. 5 in conjunction with FIG. 7 of Matsuzaki (JP 03-132910 A)) between said thin-film element part (2) (shown as layers (212, 24 and 232 in FIG. 7 of Matsuzaki (JP 03-132910 A)) and said distal end (the “horizontal surface labeled as DISTAL END in the marked-up copy of Matsuzaki (JP 03-132910 A), appended herewith), said first recess being lower than said rail top surface (123) (FIG. 7, i.e., the curved surface is more to the “right” than the ABS surface as seen in FIG. 7 of Matsuzaki (JP 03-132910 A)) and having a width defined by a width of said rail (123, 113 - see FIG. 5 in conjunction with FIG. 7 of Matsuzaki (JP 03-132910 A)).

This interpretation is consistent with even the Applicants’ disclosure. Moreover, Claim 29 (withdrawn from consideration as being drawn to a non-elected species) is dependent upon generic Claim 27. Claim 29 references a specific embodiment (FIGS. 16A and 16B of Applicants’ disclosure) which indeed has a “curved recess.”

Additionally, as per claim 31, said trailing end of the slider (1) includes the protective film (3) further having a second recess (112(122)) - see FIG. 6 of Matsuzaki (JP 03-132910 A) -

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which extends from said thin-film element part (2) in a direction generally perpendicular to the longitudinal direction.

As per claim 32, wherein said second recess (112(122)) has a top surface which is substantially parallel to said rail top surface and is lower than the first recess - see FIG. 6 of Matsuzaki (JP 03-132910 A)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (JP 03-132910 A).

See the discussion of Matsuzaki (JP 03-132910 A), *supra*.

As per claim 22, Matsuzaki (JP 03-132910 A) shows a slider for use in a conventional magnetic disk apparatus, but does not explicitly depict such a conventional magnetic disk apparatus, including conventional elements such as a head supporting part for carrying the magnetic head to enable said head to float over a recording medium; an arm part on which said head supporting part is fitted; and a driving part for moving said arm part over said recording medium.

Official notice is taken that such conventional magnetic disk apparatuses which the conventional component parts recited in claim 22 are notoriously old and well known and

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ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the magnetic head slider of Matsuzaki (JP 03-132910 A) within a conventional magnetic disk apparatus set forth in claim 22.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the magnetic head slider of Matsuzaki (JP 03-132910 A) within a conventional magnetic disk apparatus set forth in claim 22 in order to provide the magnetic head slider of Matsuzaki (JP 03-132910 A) within its intended operating environment, thereby providing the self-evident advantages of the slider of Matsuzaki (JP 03-132910 A) ("floating quantity can be reduced") within a conventional magnetic disk apparatus.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (JP 03-132910 A) in view of Chapin et al. (US 5,267,109).

See the description of Matsuzaki (JP 03-132910 A), *supra*.

As per claim 27, however, admittedly Matsuzaki (JP 03-132910 A) does not disclose wherein the first recess is formed which has a top surface substantially parallel to said rail top surface.

Chapin et al. (US 5,267,109), however, discloses an analogous slider wherein a distal end of the slider rails a first recess (e.g., 78, 80) which extend in the longitudinal direction of the slider; the recess being formed at the distal end of the slider rails, wherein the recess (78, 80) has a top surface which is lower than the top rail surfaces (74, 76) and each recess has a width

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defined by the width of the slider rails - see FIG. 4 of Chapin et al. (US 5,267,109).

Chapin et al. (US 5,267,109) discloses such a recess at the trailing ends of slider rails for the express purpose of creating subambient pressure regions at the trailing end of a slider, so as to pull the trailing end of the slider having the transducer at such end, closer to the magnetic recording medium and reduce transducer flying sensitivity to disc velocity. See COL. 2, line 62 through COL. 3, line 19 of Chapin et al. (US 5,267,109).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the flat surfaces recess at the training end of slider rails, as explicitly taught and suggested by Chapin et al. (US 5,267,109), to the slider trailing end protective surface of Matsuzaki (JP 03-132910 A).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the flat surfaces recess at the training end of slider rails, as explicitly taught and suggested by Chapin et al. (US 5,267,109), to the slider trailing end protective surface of Matsuzaki (JP 03-132910 A) in order to advantageously create subambient pressure regions at the trailing end of a slider of Matsuzaki (JP 03-132910 A), so as to pull the trailing end of the slider having the transducer at such end, closer to the magnetic recording medium and reduce transducer flying sensitivity to disc velocity. See COL. 2, line 62 through COL. 3, line 19 of Chapin et al. (US 5,267,109).

Response to Arguments

Applicants' arguments with respect to claims 19, 22, 27, 30-32 have been considered but are moot in view of the new ground(s) of rejection, including the introduction of Chapin et al. (US 5,267,109) and also a reinterpretation of Matsuzaki (JP 03-132910 A), as clearly articulated in the rejection, *supra*, based on the amended claim language.

Conclusion

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

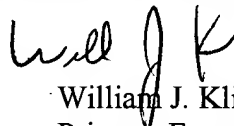
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

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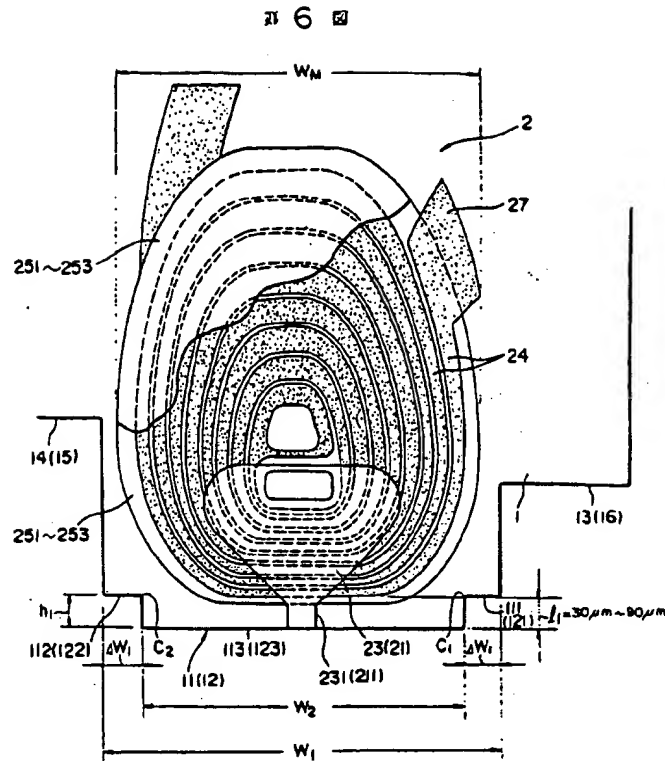
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



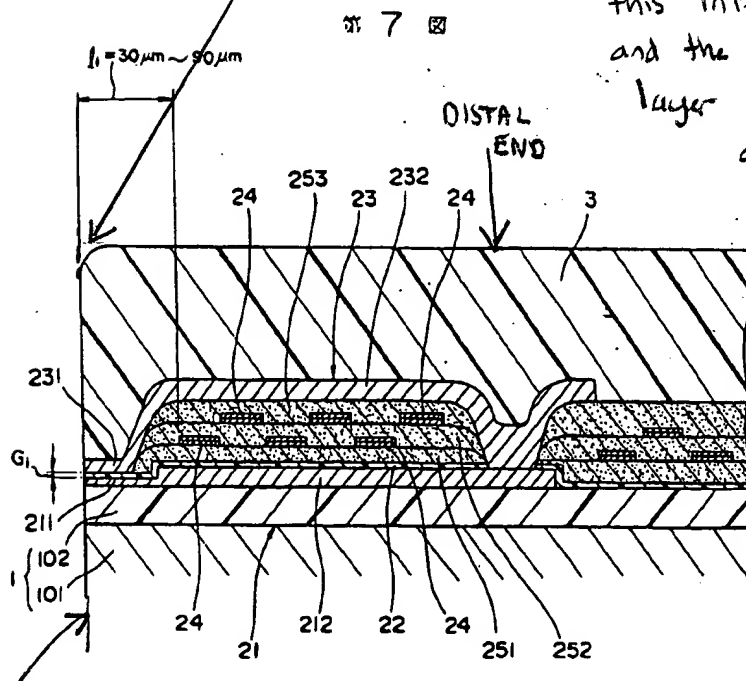
William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK



protective layer 3 is recessed away from corner intersection of the distal end of protective layer 3 and the ABS forming a ROUNDED recessed corner.

missing corner, hence curved surface at this intersection of layer 3 and the ABS. That is layer 3 is recessed away from a square corner.



air bearing surface (ABS)